

Notice of Allowability

Application No.

09/847,658

Examiner

William C. Choi

Applicant(s)

SINGER ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 1/16/2004.
2. ☒ The allowed claim(s) is/are 1-3,7,19-25,27-32 and 34-42.
3. ☒ The drawings filed on 02 May 2001 & 07 April 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

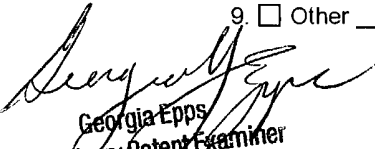
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 0404.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gerald Shekleton (Regis. #: 27,466) on April 6, 2004.

The application has been amended as follows:

1. Claim 2, line 7, delete ".", and insert therein --and has non-bending end plates--.
2. Claim 3, line 7, delete ".", and insert therein --and has non-bending end plates--.
3. Claim 21, line 6, delete ",", and insert therein --with non-bending end plates,--.
4. Claim 29, line 4, delete "chamber which", and insert therein --chamber having non-bending end plates and which--.
5. Claim 36, line 3, delete "26", and insert therein --20--.
6. Claim 37, line 3, delete "chamber a", and insert therein --chamber is a--.
7. Claim 39, line 6, delete ".", and insert therein --and has non-bending end plates--.

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Allowed Claims: 1-3, 7, 19-25, 27-32 and 34-42.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of a projection lens having an at least plane parallel manipulation chamber located as claimed, specifically wherein the chamber is connected with a pressure change means and has non-bending end plates.

Specifically, with respect to independent claim 2, none of the prior art alone or in combination disclose or teach of a projection lens having an at least plane parallel manipulation chamber located as claimed, specifically wherein the chamber is connected with a gas composition change means and has non-bending end plates.

Specifically, with respect to independent claim 3, none of the prior art alone or in combination disclose or teach of a projection lens having an at least plane parallel manipulation chamber located as claimed, specifically wherein the chamber is connected with a pressure change and gas composition change means and has non-bending end plates.

Specifically, with respect to independent claim 19, none of the prior art alone or in combination disclose or teach of a system for projection lens having a gas chamber being a manipulation chamber formed between adjacent plane-parallel optical elements,

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wherein the refractive index can be varied by pressure changes as claimed, specifically further having non-bending end plates.

Specifically, with respect to independent claim 20, none of the prior art alone or in combination disclose or teach of a system for projection lens having a gas chamber constructed as an at least approximately plane-parallel manipulation chamber as claimed, specifically in the sixth optical group.

Specifically, with respect to independent claim 21, none of the prior art alone or in combination disclose or teach of a system for projection lens having a gas chamber being a manipulation chamber formed between adjacent approximately plane-parallel optical elements, wherein the refractive index can be varied by pressure changes and changes in gas composition as claimed, specifically further wherein the chamber is formed with non-bending end plates.

Specifically, with respect to independent claim 29, none of the prior art alone or in combination disclose or teach of a method of producing microstructured components by means of a mask and a projection exposure machine with a lens arrangement as claimed, specifically further by means of an approximately plane-parallel manipulation chamber having non-bending end plates and which is connected to a gas source, and wherein the refractive index is manipulated by changes in pressure and gas composition.

Specifically, with respect to independent claim 37, none of the prior art alone or in combination disclose or teach of a projection lens for microlithography having at least one gas chamber being a manipulation chamber formed between adjacent plane-

parallel optical elements having non-bending end plates and connected to a pressure change means.

Specifically, with respect to independent claim 38, none of the prior art alone or in combination disclose or teach of a projection lens for microlithography having at least one gas chamber being a manipulation chamber formed between adjacent plane-parallel optical elements having non-bending end plates and connected to a gas composition change means.

Specifically, with respect to independent claim 39, none of the prior art alone or in combination disclose or teach of a projection lens for microlithography having at least one gas chamber being a manipulation chamber formed between adjacent plane-parallel optical elements having non-bending end plates and connected to a pressure change and a gas composition change means.

Specifically, with respect to independent claim 40, none of the prior art alone or in combination disclose or teach of a projection lens having at least one gas chamber constructed as an at least approximately plane-parallel manipulation chamber as claimed, specifically having non-bending end plates and located in the lens arrangement between an end plate and a lens situated adjacent to the end plate, and connected with pressure change means.

Specifically, with respect to independent claim 41, none of the prior art alone or in combination disclose or teach of a projection lens having at least one gas chamber constructed as an at least approximately plane-parallel manipulation chamber as claimed, specifically having non-bending end plates and located in the lens

arrangement between one of said end plates and a lens situated adjacent to the end plate, and connected with gas composition change means.

Specifically, with respect to independent claim 42, none of the prior art alone or in combination disclose or teach of a projection lens having at least one gas chamber constructed as an at least approximately plane-parallel manipulation chamber as claimed, specifically having non-bending end plates and located in the lens arrangement between one of said end plates and a lens situated adjacent to the end plate, and connected with pressure change and gas composition change means.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C.
William Choi
Patent Examiner
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April 7, 2004


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